

ATLANTIC PILOTAGE AUTHORITY *Annual Report 2016*



Atlantic Pilotage
Authority

Administration de pilotage
de l'Atlantique

Canada



2016 EXECUTIVE & MANAGEMENT



Left to right: Jennifer Holland, Human Resources Manager; Brian Bradley, Director of Finance; Captain Sean Griffiths, Chief Executive Officer; Peter MacArthur, Chief Financial Officer; Captain Deidre Lewis, Director of Operations; Elaine Selig, Executive Assistant. Missing: Brent Carroll, Pilot Boat Manager.

2016 BOARD OF DIRECTORS



Captain Edward Anthony, Pilotage Representative, St. John's, NL



Alisa Aymar, Public Sector Representative, Meteghan River, NS



L. Anne Galbraith, Chair, Dartmouth, NS



Captain Alexander MacIntyre, Pilotage Representative, Head of St. Margaret's Bay, NS



Patricia Mella, Vice-Chair & Public Sector Representative, Stratford, PE



Brian Ritchie, Shipping Industry Representative, Shediac Cape, NB



Jim Stoneman, Shipping Industry Representative, Windsor Junction, NS

TABLE OF CONTENTS

Mandate, Mission, Vision, and Core Values	1
Letter from the Chair and CEO	2
About the Atlantic Pilotage Authority	3
Year In Review 2016, Strategic Direction	5
Major Port Summaries	10
Year In Review 2016, Financial Overview	12
Compulsory Pilotage Areas	15
On the Horizon: 2017 and Beyond	16
Financial Statements	17

CORPORATE HEADQUARTERS

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Mandate

The mandate of the Atlantic Pilotage Authority is to establish, operate, maintain and administer, in the interest of safety, an efficient pilotage service in the Atlantic region.

Mission

To deliver safe, effective and self-sustaining marine pilotage services in Atlantic Canada.

Vision

The Vision of the Atlantic Pilotage Authority (APA) is to be a respected leader in marine pilotage safeguarding people, property and the environment.

To achieve the vision, the Authority must demonstrate:

- An industry-leading safety record
- Operational efficiency where customers receive tangible value for the tariff they pay
- Marine expertise where APA pilots are viewed as leaders in the field of marine navigation and safety
- A self-sustaining business model that allows the Authority to provide services and be financially self-sufficient

Core Values

SAFETY

The Authority will emphasize safety over any competing goals or pressures to ensure the protection of people and safeguarding of property.

ENVIRONMENT

The Authority will strive to protect and conserve the natural environment and local communities.

SERVICE

The Authority is dedicated to being a trusted partner in providing effective and efficient marine pilotage services and expertise in marine navigation.

RELATIONSHIPS

The Authority will build and maintain long-term respectful relationships with employees, customers, contractors, and suppliers.

ACCOUNTABILITY

The Authority will be accountable to the Federal Government, the public, and to its customers for actions taken and the results of its operations.

LETTER FROM THE *Chair & CEO*

March 6, 2017

The Honourable Marc Garneau, P.C., M.P.
Minister of Transport
Tower C – 330 Sparks Street
Ottawa, ON
K1A 0N5

Dear Minister:

Pursuant to Section 150 of the *Financial Administration Act*, it is our pleasure to present the Atlantic Pilotage Authority's Annual Report for 2016.

Safety is paramount to the Authority and we are pleased to report that the Authority has completed 7,959 assignments during 2016 where 99.92% were without a reported shipping incident. There were no injuries or environmental contamination due to any of the incidents reported.

The Authority aims to provide pilotage service within one hour of the confirmed ordered time on 100% of its assignments. In 2016, the Authority provided a pilot within this time frame on 99.5% of the assignments. The number of assignments completed without a registered complaint was 99.7% of the total assignments.

The Authority experienced an operating profit of \$1.197 million in 2016 after incurring losses in the previous two years. This is mainly due to the cooperation of our customers in agreeing to tariff adjustments, increased average vessel size and a marked reduction in operating expenses. The profit above also includes \$278 thousand in revenue raised through a surcharge intended to recapture the majority of the operating losses incurred in the previous two years. This surcharge is in effect for a maximum period of 36 months, to be reviewed annually to determine if it is still required.

Pilotage assignments during the year declined by 4.7% from 2015, and were 6.0% under budget. An increase in larger vessels offset the effects of this decline and revenues were within 1% of budget. The Authority reduced expenses by 1.4% from 2015 and were 2.7% under budget for the year. The most significant savings were in pilot boat repair costs as the Authority has invested in more robust equipment and preventative maintenance.

A Special Examination of the Authority was conducted in 2016. The Board of Directors and management took the process and subsequent recommendations very seriously while seizing the opportunity to improve its business practices. The examination resulted in ten recommendations where seven of them were addressed by year-end with a commitment to complete the final three by June of 2017.



L. Anne Galbraith, Chair and Captain Sean Griffiths, Chief Executive Officer

Management's regular consultations with its Atlantic Region stakeholders continues to provide vital input on the service levels, operational issues, and pilotage tariffs within each of its major ports. These stakeholder meetings provide open dialogue with customers and allows the management of the Authority to stay connected to actual or potential developments in its region.

The Authority's relationship with its stakeholders remains strong as management and pilots are actively engaged in multiple projects in various districts. Some developments include upgrading or enhancing existing infrastructure, assessing the risk of new operations or planning for larger vessels at existing terminals.

In late 2016, the Authority conducted its first Customer Satisfaction Survey which was used as a formal mechanism to collect feedback from stakeholders, customers, service providers and ship masters regarding their level of satisfaction with our pilotage service. This feedback is one of the most important ways in which we learn how to continuously improve as an organization that strives for excellence in our operations. We are pleased to report that 94.9% of the respondents were satisfied with the Authority's commitment to safety while 86.1% were satisfied with the efficiency of the pilotage service provided.

It is once again our pleasure to report that the Atlantic Pilotage Authority continues to provide an exemplary service, in the safest and most economical manner, to the satisfaction of its users, and within the obligations of the *Pilotage Act*.

Respectfully submitted,

Captain Sean Griffiths, MM, MBA
Chief Executive Officer

L. Anne Galbraith, CPA, CA
Chair



ABOUT THE *Atlantic Pilotage Authority*

The Atlantic Pilotage Authority (APA) is a Federal Crown Corporation responsible for providing marine pilotage service to Atlantic Canada. The APA was established in 1972 by the *Pilotage Act*, with the following objective:

“to establish, operate, maintain and administer in the interests of safety an efficient pilotage service”. (*Pilotage Act*, Section 18)

The APA works with ports, the shipping industry, and other stakeholders to provide the safest and most efficient marine pilotage service possible to Atlantic Canada.

Throughout history and up to the present day, the diverse and challenging coastline and waters of Atlantic Canada have defined the character and development of the region. Marine pilots have played a major role in this development in the past, and continue to do so today.

The Authority provides a valuable and necessary service to the marine community in Atlantic Canada. The highly skilled marine pilots, boat crews, dispatchers, and office staff employed by the APA make vital contributions to the protection of the environment, to safeguarding the lives of mariners, and to preserving and promoting the economic wellbeing of ports in Atlantic Canada.

Corporate Governance

Corporate governance refers to the process and structure for overseeing the direction and management of a corporation so that it carries out its mandate and objectives effectively.

The Authority is composed of a Chair, and not more than six members, referred to herein as the Board of Directors. The present Board structure consists of two shipping industry representatives, two public sector representatives, and two representatives with marine pilotage experience. This representation provides an excellent cross section of marine knowledge, shipping perspective, and business acumen. The Board is appointed by the Governor in Council, and is accountable to the Minister of Transport. The Board

has a very active committee structure, and new Board Members are provided with an orientation to the Authority, and training in corporate governance upon appointment. Through this process, the Board has built an effective structure for overseeing the direction and management of the Authority so that it effectively fulfills its mandate. Policies regarding the stewardship of the Authority and the functioning of the Board are under continual review, and where necessary, changes are implemented.

The Board has created five committees that focus on the major areas of governance for the Authority. The committees are chaired by a Board member, have terms of reference, and report directly to the Board on a regular basis. Each committee is responsible to identify, document and mitigate their risks on a regular basis.

Audit Committee

The Audit Committee is a core committee of the Authority's Board of Directors. The *Financial Administration Act* (FAA) specifically requires the Authority to establish an audit committee. There are four members designated as members of this committee. Its responsibilities include providing financial oversight for the Authority, improving the quality of financial reporting, and increasing stakeholder confidence in the credibility and objectivity of the corporate performance.

Governance, Nominating and Regulations Committee

There are three members of this committee and they meet at the call of the committee chair. Its mandate includes defining roles and responsibilities for the Board and management, as well as consulting with the Chair regarding the structure of Board committees. This committee recommends candidates for the Board as well as the Chair and CEO positions and critically reviews management recommendations amending any regulations associated with the *Pilotage Act*, General Pilotage Regulations, and Atlantic Pilotage Authority Regulations.

Human Resources Committee

This committee meets as needed and is made up of three members. The committee's responsibilities include the CEO's performance evaluation, reviewing significant changes to the organizational structure, reviewing the mandate for collective bargaining, and monitoring succession planning for management and pilot resources.

Pilot Boat Committee

This committee has three members. The committee meets as needed and its responsibilities include the critical review of management reports associated with the operation of pilot boats and technology, and actively solicits further information when deemed necessary.

Risk Committee

This committee has three members and its responsibilities include the active solicitation of information regarding significant risks and exposures while reviewing the adequacy of mitigations of those risks identified. This includes the monitoring of the Enterprise Risk Management Framework and the progress achieved in mitigating the identified risks. This committee is also responsible for oversight of the process, financial and management control and practices relating to a specific Pilotage Risk Management Methodology (PRMM); critically reviewing facilitator's, stakeholders' and management reports associated with a PRMM and then making a recommendation to the Board to accept, reject or amend the recommendation(s).

Special Examination

During 2016, the Office of the Auditor General (OAG) conducted a special examination of the Authority as required by section 138 of the *Financial Administration Act*. A special examination is a form of performance audit and is conducted by the OAG within Crown corporations. The examination considered whether the systems and practices of the Authority provided reasonable assurance that its assets were safeguarded and controlled, its resources were managed economically and efficiently, and its operations were carried out effectively. The opinion of the OAG was that there were significant deficiencies in the corporate management practices and in the management of pilotage services.

There were ten recommendations contained in the report. Of the ten recommendations, seven were addressed by the Authority by the end of 2016. Progress was made on the three remaining recommendations at year-end with completion expected by the end of the second quarter of 2017. The special examination report can be found on the Atlantic Pilotage Authority website.

Internal Audit

The findings of the special examination caused the Authority to focus on the documentation of policies and procedures and document tracking practices. A third party was contracted in 2016 to evaluate the Authority's current policies, procedures, and practices against ISO 9001-2015 requirements and the Maritime Occupational Health and Safety Regulations. A preliminary report was received by year-end with the final report and recommendations to be received early in 2017.

YEAR IN REVIEW 2016

Strategic Direction

Corporate Objectives

On an annual basis, the Authority engages in strategic planning sessions involving the Board and management. The most recent sessions were held in the summer of 2016 with an external facilitator. At this session, the mission, vision, and core values were updated for the Authority. Five corporate objectives were set at this session and replaced the previously set areas of focus. These areas of strategic direction will be reviewed annually. The Authority's corporate objectives are the following:

1. *To deliver safe and effective marine pilotage services in Atlantic Canada.*
2. *To maintain financial self-sufficiency by exercising effective cost management and establishing tariffs that are fair and reasonable.*
3. *To provide a reliable and self-sustaining service by safeguarding the Authority's people and assets while planning for succession and asset replacement.*
4. *To assume a leadership role in marine navigation by providing an expertise in navigational safety and marine operations.*
5. *To contribute to the Federal government's environmental, social, and economic policies as they apply to the marine industry in Atlantic Canada.*

Safe and Effective Service

The Authority conducts frequent meetings with stakeholders throughout the region to determine their requirements, report our financial results, discuss operational issues, and exchange information. During 2016, the Authority attended consultation meetings in New Brunswick, Nova Scotia, and Newfoundland and Labrador. Meetings were held for the areas of Saint John, NB; Halifax, NS; Cape Breton, NS; St. John's, NL; and Placentia Bay, NL. Meetings were also held with the Shipping Federation of Canada in Montreal to discuss the overall APA operation. In total, the Authority held 12 consultation meetings during the year. In addition to these meetings sponsored by the Authority, management and pilot representatives attended many other meetings held by stakeholders throughout the region.

During the year, the Authority held an Annual Public Meeting in Sydney, NS. The Authority gave a presentation of the 2015 financial results and strategic direction to attendees and interested stakeholders.

The Authority continued to make long-term investments to improve the quality of service it provides. Pilot numbers are monitored closely in combination with service levels to determine the appropriate workforce necessary to provide a safe and effective service. The current goal is to reach and then maintain a steady workforce of 48 fully effective employee pilots, an increase over a low of 42 employed at the beginning of 2014. This goal is dependent on future traffic levels and is reevaluated annually. There were 47 pilots employed at the end of 2016.

Two fast pilot boats were completed in 2007 for service in the Placentia Bay area in Newfoundland. In 2012, the Authority completed the construction of a new pilot boat, the *Chebucto Pilot*, for the port of Halifax. In early 2013, the Authority launched a sister vessel, the *Captain A. G. Soppitt*, to provide service in Saint John. The Authority continues to monitor pilot boat operations in all areas to determine whether improvements can be made.

The Authority has also been testing and helping develop cost effective portable pilotage units (PPUs) that would be beneficial to the specific port pilotage done in the Atlantic region. The PPU's are brought onboard by the pilot and are setup before the pilot takes conduct of the vessel. This makes the use of PPU's impractical in some APA ports with short pilotage distances. The PPU is a tablet that contains the local marine charts and is connected to a GPS unit and rate of turn indicator. The unit receives digital information from the ship, other ships, the shore, cellular transmissions, and satellite. It allows the pilot to independently verify ship information, track and predict ship course, and record/play back the assignment. It is used by pilots to provide the specific information in real-time that assists with navigation and training. The full deployment and training for these units began in 2016 and will be deployed to all the Authority's pilots, where their use is deemed to be beneficial, by early 2018.

The Authority is promoting the deployment of weather buoys in several key strategic areas to provide more accurate and timely information on weather and sea conditions for pilots, other mariners, and industry. This initiative has been spearheaded jointly by the Authority and the Canadian Marine Pilots Association, with support from Port Authorities, educational institutions, the Canadian Coast Guard, and private industry. This initiative has resulted in buoys being launched and made operational in Halifax and in Saint John.

Key Service Indicators

The Authority consults with its customers to determine the level of service required in each port. In some ports, the pattern of vessel traffic contains numerous spikes of activity, creating a need for more pilots than the overall average number of assignments may indicate. The Authority determines the staffing levels for each compulsory pilotage area based on the customer requirements and the expected activity in each port. Occasionally, if traffic levels peak too high, delays may be incurred. Staffing for these rare peaks would be too costly for the customers of the port. The Authority works with individual ports to deal with peak periods and may include the addition of a retired pilot under a short-term contract to help cover the peak in traffic during this relatively brief period.

The Authority developed a structured methodology for handling complaints several years ago in response to the Ministerial Review of Outstanding Pilotage Issues. The mechanism is designed to be as user friendly as possible, and the goal of the Authority is to ensure that timely feedback is provided to the complainant. The most common reason for a complaint to be submitted was due to a delay in an assignment. In some cases,

99.92% of the 7,959 pilotage assignments were incident free

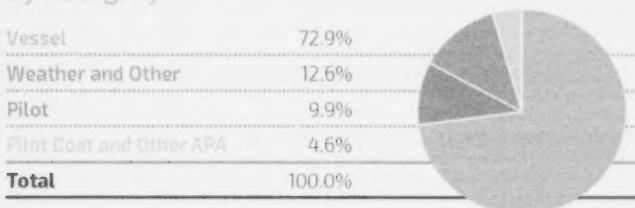
the delay is caused by factors beyond the control of the Authority, such as weather or delays caused by the non-availability of port services such as tugs.

The Authority received 22 (19 in 2015) complaints out of a total of 7,959 (8,348 in 2015) assignments during 2016. The remaining 99.7% (99.8% in 2015) of assignments were performed without receiving a complaint from the customer. All complaints received are included in the above total, including those submitted that involved delays not caused by the Authority.

In late 2016, the Authority conducted its first Customer Satisfaction Survey as a means to collect feedback from stakeholders, customers, service providers and ship masters regarding their level of satisfaction with the pilotage service. When asked to grade the Authority's commitment to safe pilotage operations, 94.9% of respondents were satisfied or very satisfied. The efficiency of marine pilotage services provided by the APA received 86.1% satisfaction grades.

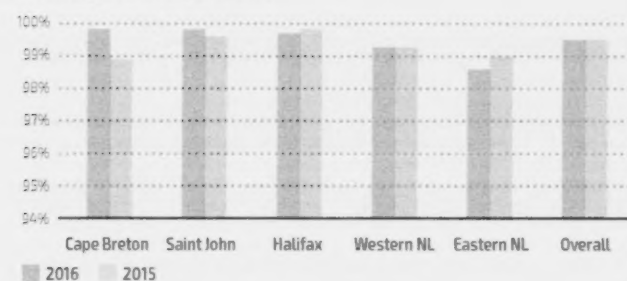
During 2016, 96.7% (96.7% in 2015) of all assignments commenced within one hour of the firm order time. Most of the delays were caused by circumstances outside the control of the Authority, such as a vessel delaying sailing due to cargo, labour, or tug issues. Vessel delays comprised 72.9% of all delays in 2016 (64.6% in 2015). Weather conditions and other issues outside of the Authority's control caused 12.6% of the delays (19.5% in 2015). For the remaining 14.5% of delays (15.9% in 2015), the primary contributing factor was a shortage of pilots or non-availability of pilot boats. The average length of delays was 2.4 hours, with the corresponding time in 2015 being 3.1 hours. The chart below indicates the category of delay for the 3.3% of assignments that were not commenced on time.

2016 Delayed Assignments by Category



The Authority aims to provide service within one hour of the ordered time on 100% of assignments (excluding delays caused by factors beyond the Authority's control). In 2016, a pilot was provided within this time frame on 99.5% of the assignments (99.5% in 2015). Performance is also measured for each individual district or port. During 2016, Eastern Newfoundland was the only area that fell below 99% with pilots delivered within one hour on 98.6% (99.0% in 2015) of the assignments. The following chart provides the results for each port or district.

Percentage of Pilotage Assignments without Pilotage Delays 2016



2016 Shipping Incidents

During 2016, there were 6 shipping incidents reported by the Authority's pilots. There were no injuries or environmental contamination associated with any of these incidents. All incidents are categorized in the chart below:

Type of Incident

	2016	2015
Damage to Equipment		
Contact with wharf	3	3
Contact with port equipment	2	1
Contact with sea bed	1	0
Total incidents causing damage	6	4

The Authority endeavours to provide a safe and efficient pilotage service in the Atlantic region. The total number of occurrences indicates 99.92% of the 7,959 pilotage assignments were incident free. In 2015, 99.95% of 8,348 pilotage assignments were incident free.

Financial Self-Sufficiency

The *Pilotage Act* requires that pilotage tariffs be fixed at a level that permits the Authority to operate on a self-sustaining financial basis, and that the tariffs set are fair and reasonable. To achieve self-sufficiency, tariff adjustments are made based on the financial and operational issues within each port, rather than overall tariff increases that impact all areas. The goal is to have each area become financially self-sufficient to eliminate cross-subsidization among ports. The Authority relies on projections of future traffic levels and the corresponding revenue and expenses to determine the financial health of the individual ports. All aspects of an area's operation are monitored to determine whether cost cutting measures are more appropriate to achieve a positive result before tariff increases are considered.

The Authority amended tariff charges for 2016 in nine compulsory pilotage areas: Saint John, NB, Strait of Canso, NS, Sydney, NS, Bras d'Or Lake, NS, Humber Arm, NL, Bay of Exploits, NL, Placentia Bay, NL, St. John's, NL, and Holyrood, NL. A two-stage increase was applied to the Newfoundland non-compulsory tariffs with increases implemented in 2016 and 2017. A 1.5% surcharge was added for the eleven ports serviced by employee pilots. This surcharge is to be in effect for 36 months and is intended to recapture the majority of the operating losses incurred in the previous two years.

All other tariff charges in the remaining compulsory and non-compulsory pilotage areas remained unchanged. The amended tariffs were intended to allow the Authority to remain financially self-sufficient while providing the quality of service requested by the Authority's clients.

The Authority has continued to have declining activity in several ports with declines in local coal, potash and gypsum industries. Assignments have also been lost in areas where masters have successfully written the certificate examinations allowing them to pilot their own vessels in their regular port of call. The Authority did benefit from larger average vessel size in 2016 as more assignments were required on large oil tankers and larger container vessels provided more activity. These factors combined to leave the Authority within 1% of budgeted revenues.

A focus for the Authority in 2016 was to reduce administration costs. Operating costs are more difficult to cut without negatively affecting fulfillment of the Authority's mandate. Administration and dispatch costs were cut from 2015 levels and operating costs equaled the previous year's level. Total costs for 2016 were 2.7% under budget.

The increased tariffs, combined with the cost containment actions, resulted in the Authority finishing the year with an operating profit of \$1.197 million. This has allowed capital reserves to be replenished to a point that would allow the Authority to meet its obligations during short-term periods of operating losses.

Reliable and Self-Sustaining Service

Staffing

Annually, the Authority determines the required pilot strength for each port or district based on forecasted activity, service requirements, succession planning, and consultation with industry. To support this annual strategy, the Authority executes a resource plan, which in 2016, had to specifically account for planned retirements and the hiring of two Apprentice Pilots.

Early in the year, the Authority had two Pilot retirements, one in Saint John, NB and one in Halifax, NS, who combined for an outstanding forty-one years of service. Resource forecasting led to the hiring of two highly skilled and qualified Apprentice Pilots to backfill for planned retirements and to ensure continued support for service requirements in the District of Cape Breton, NS and in Halifax.

At the end of 2016, the Authority had two candidates on the Halifax and Southeastern NL eligibility lists, and one candidate on the Cape Breton list. Currently, there are no candidates on the Saint John eligibility list and the Authority will be hosting a competition in 2017. Further, there are no candidates on the Western NL eligibility list as operation resources do not require it at this time, however the Authority continues to monitor forecasted activity through projected retirement dates and consultation with industry.

In early 2016, the Authority filled the Director of Operations position with a licensed Master Mariner, who also holds relevant shore side operations experience.

The other staffing requirements remained static during the year.

Workplace Safety

One of the ways the Authority maintains a reliable and self-sustaining service is through a strong emphasis on safeguarding the

Number of Employees

	2016	2015	2014
Employee pilots	47.0	47.0	47.0
Pilot boat	18.0	18.0	18.0
Officers & Administrative	9.5	9.5	9.5
Dispatch	5.0	5.0	6.0
Total employees	79.5	79.5	80.5
Entrepreneurial pilots	11.0	11.0	9.0

employees. This core value is supported through the Occupational Health and Safety Committee (OHS).

In early 2016, the Occupational Health and Safety Committee established its annual objectives to maintain a high level of safety and well-being for all parties involved in executing a safe and efficient pilotage operation. Annual OHS objectives are established in compliance with the internal APA OHS system, the Canada Labour Code Part II, Marine Occupational Health and Safety Regulation, and other relevant legislative documentation set out by federal governing bodies.

2016 Occupational Health and Safety Objectives

- (1) Establish, implement, promote, and enforce OHS system programs, safe operating procedures, and required record keeping throughout the APA through clear communication of workplace health and safety responsibilities at executive, manager, and employee levels.
- (2) Improve the understanding of applicable federal and marine occupational health and safety regulations and standards by all workplace parties, by means of education, promotion, inspection, investigation and due diligence research on current OHS related regulations and laws.
- (3) Maintain a high level of communication between the OHS Committee and APA executive management to ensure action and accountability for all safety related matters.

The Authority fulfilled these objectives by:

- (1) The Occupational Health and Safety Committee continues to hold frequently scheduled meetings and is committed to working in a spirit of consultation with this committee, all employees, and contractors to ensure that a safe and healthy workplace is maintained. The Committee met nine times in 2016, with seven meetings held via teleconference due to operational and geographic constraints and two meetings held over a two-day in-person session in our Halifax head office. The Committee is comprised of a representative from each function group within the APA and two management representatives to ensure the continued clear communication of OHS system programs is shared and accessible to all employees.
- (2) Over the 2016 year, the Committee issued an education package to all employees regarding their responsibilities within the OHS System and the applicable federal and, if applicable, the marine occupational health and safety regulations. Employees continued to receive applicable education throughout the year as OHS system programs were reviewed and/or amended by

the Committee. Additionally, the Committee emphasized the importance of sharing preventative safety measures through the ability to electronically report near-miss events and occurrence reporting.

- (3) Emphasizing our commitment to workplace safety, the minutes of the Occupational Health and Safety Committee meetings are reviewed on a quarterly basis by the Authority's Board of Directors and monthly (or as required) by the appropriate APA Officers.

Pilot Boats

The pilot boat services are essential to the operation of the Authority as these vessels are used to transport pilots to and from their assignments in each of the seventeen compulsory ports.

The APA has three models for pilot boat operations:

- In two of the major ports, Halifax and Saint John, the Authority owns and operates pilot boats, with the crew being employees of the APA.
- In Placentia Bay and Sydney, the Authority owns the vessels, with the manning contracted out to a local company.
- In the Strait of Canso, and in minor ports, a contractor provides both boat and crews.

To minimize the possibility of service interruption, spare equipment and spare vessels are kept for quick replacement when required. There was no significant service interruption due to the availability of a pilot boat in 2016. At year-end, the Authority was searching for two vessels to add to the APA fleet as an upgrade to older vessels and to increase the redundancy and reliability of the service.

Leadership

Training

Training is planned by the Authority based on the need for exposure to new technologies, staged training required by new pilots, the need for refresher courses for senior pilots, and new regulatory requirements that may come into force from time to time. The training for the Authority is a progressive program that is determined with the input of pilot representatives from each area. Apprentice and junior pilots learn on the job by being mentored by senior pilots. All pilots attend training courses in manned models or simulators early in their careers, followed after some further experience by a more advanced course. Refresher courses are offered periodically to senior pilots. Other courses, such as Bridge Resource Management, are offered to all pilots as well. In addition, the Authority has worked with industry and the pilots to develop customized courses in such specialized areas as the use of tractor tugs for tanker escort and the characteristics of azipod propulsion systems on cruise ships.

Consultation

The Authority and its pilots are keenly interested in ensuring that safety is not compromised when new facilities are built or a change in traffic patterns is noted in a port. The Authority makes its pilots available to assist industry and communities with various marine projects. On many occasions, ports and industry request the input of the Authority and its pilots during the planning stage of new projects. This advice may involve the

positioning of new berths, the feasibility of bringing larger ships to a facility, analysis of required air draft under fixed structures, or the programming of simulators used for marine training. Recent projects on which the Authority provided consultation and assistance include the following:

Newfoundland

- Assisted the North Atlantic Refinery with a new bunker supply operation. The Authority provided assistance in the evaluation of several potential project ideas before the customer decided on a bunker delivery vessel. The refinery will now be able to capture vessels entering the emissions control zone requiring low sulphur diesel.
- Conducted Long Harbour simulations and risk assessments to reduce tug requirements for certain vessels. This had a positive commercial impact for the customer by reducing costs and increasing operational flexibility.
- Simulated a very large cruise vessel for St. John's harbour, providing confidence and identifying environmental criteria to pilot and berth the vessel. This has a large economic impact for the city with vessels bringing as many as 3,500 passengers.
- Hebron Project: The Authority's pilots are providing input for the arrival of the 35,000 tonne Utilities-Process Module for the Hebron Platform in Bull Arm.

Nova Scotia

- Sydney cruise terminal expansion and dock configuration: this will allow two cruise ships to berth simultaneously eliminating the need for an anchored vessel to tender passengers, ultimately making the port more marketable and attractive. The dock will also be used for commercial interests in the off season.
- Bear Head LNG support: from dock configuration, vessel approaches and berthings to emergency manoeuvres and contingency planning. Nearly 50 simulations have been conducted in Rhode Island with Transport Canada in attendance. There has also been substantial TermPol support.
- Extensive support for the port of Halifax with regard to the MacDonald Bridge re-decking. This has included north-bound traffic management, risk assessments, stakeholder relations and contingency planning.
- I-Heave project to determine the dynamic under keel clearance for the larger container vessels that have been, and will continue to call at Halifax. This study is also meant to determine whether a change to operational procedures are required to accommodate container ships in excess of 8,700 TEU. These vessels are a component of the Port's strategy to maintain and enhance its competitive position in a rapidly changing global industry.
- Port of Halifax Master Plan, providing input and consultation as the Port develops plans for berthing two Ultra-Large Container Ships simultaneously at one terminal.
- The Authority provided input with regards to mooring requirements for vessels arriving and departing at the new Irving Oil Woodside Marine Terminal.

New Brunswick

- Conducted simulations for larger Quantum Class cruise vessels into Saint John in order to maximize the tidal window. The result is increased duration in the port which equates to a positive economic impact for the community.
- The Authority has been involved in the dock design, configuration and TermPol support for the Energy East project.
- For the Miramichi, the Authority has been involved in assessing the area for possible winter navigation of the river.

Federal Government's Policies

The Authority strives to contribute to the Federal Government's policies and initiatives. The Board and management are responsible for complying with legislative and other authorities that govern the Authority, including Part X of the *Financial Administration Act* and regulations, the *Pilotage Act* and regulations, the by-laws of the Atlantic Pilotage Authority and the directive issued pursuant to section 89 of the *Financial Administration Act*.

Directive on Travel, Hospitality, and Conference Expenses

This directive instructed the Authority to align its travel, hospitality, conference and event expenditure policies, guidelines and practices with the Treasury Board policies, directives and related instruments on travel, hospitality, conference and event expenditures. The Authority revised its travel, hospitality, conference and events policy on July 1, 2016, and continues to work to bring it into full compliance with the directive.

The Atlantic Pilotage Authority's area of operation is defined as all the Canadian waters in and around the provinces of New Brunswick, Prince Edward Island, Nova Scotia, and Newfoundland and Labrador, including the waters of Chaleur Bay in the Province of Quebec. Within this region, the Authority has designated 17 compulsory pilotage areas. Each one has its unique industries and are serviced by licenced pilots and the required infrastructure such as pilot boat services.

Conducting regular pilotage operations requires travel by the Authority's pilots and boat crew. These costs are recovered directly from the customers for whom the services were delivered. Travel costs are also incurred for training of operational personnel as much of the training is done in Europe and Quebec City. These costs are included in the Authority's training budget. Included in the *Pilot boats, operating costs* category of the Authority's financial statements are travel costs associated with vessel maintenance personnel performing their regular duties.

Travel of pilotage authority board and management representatives is required to meet the needs of stakeholders in each area and manage the Authority's resources effectively. Periodic travel outside of the Authority's area of operation is also required to meet with Government representatives, industry associations, and the other pilotage authorities. Conferences include port specific marine business conferences and pilotage specific conferences. Board travel costs are captured with all other Board costs under *Professional and special services* in the Authority's financial statements.

The table at top right shows the travel, hospitality, and conference expenses for administrative employees and the Board.

A Clean Environment and a Strong Economy

A primary purpose of the Authority is to protect the environment and communities from marine incidents. As stated earlier, there were 6 shipping incidents reported in 2016 with no environmental consequences or injury. In adherence to the *Canadian Environmental Assessment Act, 2012*, while fulfilling its mandate, the Authority did not initiate any activity on Federal land or outside Canada that resulted in significant adverse environmental effects.

Recently, the Authority has contributed to the *Canada Transportation Act (CTA)* review that evaluated the efficiency and effectiveness of the application of the Act and the ancillary

Travel, Hospitality, and Conference Expenses

(in thousands of dollars)

	2016
Operations	654
Training	50
Engineering	17
Total Travel for Operations	721
Administration	140
Board	32
Total Administration Travel	172
Hospitality	9
Conference Fees	13
Total Hospitality and Conference Expenses	22
Total Travel, Hospitality, and Conference Expenses	915

regulations, including the *Pilotage Act*. The Authority will participate in the Government's long term vision of transportation in Canada and act to support the Government's focus on "a clean environment and a strong economy".

The Authority continues to monitor and assess all areas within its mandate to determine any change in factors and circumstances that may have an impact on safety. If such a change is determined to warrant closer review, the Authority will employ an outside facilitator to conduct a Pilotage Risk Management Methodology (PRMM). The PRMM, developed jointly by the pilotage authorities and Transport Canada, uses a proven risk management methodology to assess the circumstances in the area. The PRMM has been used in an effective manner by the Authority on several occasions in the past to determine inherent risks in changing conditions.

In March 2012, the Board approved the PRMM Facilitator's recommendation to make the port of Belledune, NB a compulsory pilotage area. The applicable amendments to the Atlantic Pilotage Authority regulations were published in 2013, and objections were received. An investigator was appointed in 2016 and the Authority is awaiting the investigator's review of the Belledune recommendation. A PRMM to evaluate the non-compulsory status of Sheet Harbour, NS began in 2016 with completion expected early in 2017. A review of Pictou, NS is scheduled for 2017.

The Authority supports the Government initiative in terms of cost containment. In 2016, the APA reduced its administration and dispatch costs by 12.4% from 2015 levels. Operating costs are more directly related to the effectiveness, reliability, and safety of the service and are difficult to reduce without detrimental effects to stakeholders. These expenses and the corresponding tariffs are discussed with stakeholders and their support is measured for future investments or service levels. The operating expenses in 2016 were equal to their 2015 levels.

In cooperation with Government initiatives, the Authority puts a focus on workplace health by giving all employees confidential access to an Employee and Family Assistance Program provided by a third party free of charge to them and their dependents. The Authority also fosters a workplace that does not tolerate violence, harassment or discrimination through the enforcement of a Prevention of Violence and Harassment in the Workplace Policy.

MAJOR PORT *Summaries*

Of the Authority's seventeen compulsory pilotage ports, the four largest provide more than 80% of the compulsory port revenue.



Halifax, NS

Port Description and Navigational Challenges

As Atlantic Canada's most diverse shipping port, Halifax has many marine facilities in the port, including two container terminals, an autocarrier terminal, an oil terminal, a gypsum dock, cruise ship berths, bulk cargo docks, shipyard facilities, naval docks, offshore supply ship facilities, and several others.

Pilots must become familiar with each facility and with the various types of vessels calling at Halifax. There are also two harbour bridges and the Narrows to navigate through to reach some facilities.



Placentia Bay, NL

Port Description and Navigational Challenges

The two primary facilities in the Bay are an oil refinery at Come-by-Chance and an oil transshipment terminal at Whiffen Head. The transshipment terminal receives oil from the Hibernia, Terra Nova, and White Rose oil fields through large shuttle tankers, and exports the oil in smaller tankers that call in ports that do not have the deep draft available in Placentia Bay. The oil refinery is capable of refining many grades of crude oil and sources feedstock from the Gulf of Mexico, the Middle East, and offshore Newfoundland, as well as other sources.

Along with the two primary facilities in Placentia Bay, there are other facilities such as the nickel smelter at Long Harbour, an asphalt facility at the head of the Bay, and fish processing plants.

Some of the largest ships afloat call at Placentia Bay, with APA pilots conducting the navigation and berthing of these ships with great precision and skill. Pilots must be constantly aware of weather conditions in the area, with powerful prevailing winds at the pilot boarding station, and very unpredictable winds as they proceed up the Bay. The use of tugs to escort and berth ships must be handled with exceptional co-ordination and teamwork.

Pilotage Assignments

	2016		2015		2014	
	Assignments	%	Assignments	%	Assignments	%
Container Ship	1,113	42.1%	993	35.6%	888	32.2%
General Cargo Vessels	774	29.3%	941	33.8%	874	31.7%
Tanker	315	11.9%	390	14.0%	486	17.6%
Cruise Ship	277	10.5%	288	10.3%	276	10.0%
Other	165	6.2%	175	6.3%	236	8.5%
Total Assignments	2,644	100.0%	2,787	100.0%	2,760	100.0%

13 Pilots 8 Boat Crew 2 APA Owned Pilot Boats:
Chebucto Pilot - in service since 2012
APA#1 - in service since 1976

2016 Financial Summary

Revenues for the area finished 2% under budget due primarily to lower fuel costs and the related fuel charge revenues. The larger container vessels that added regular calls to the port in the last half of 2015 continued through 2016. General cargo assignments and tanker assignments were lost to an increase in certificated masters. Expenses were 5% under budget with the majority of savings in pilot boat expenses. The area finished with a \$556 thousand profit, when the surcharge is excluded.

Pilotage Assignments

	2016		2015		2014	
	Assignments	%	Assignments	%	Assignments	%
Tanker	1,023	97.2%	882	97.7%	924	97.7%
Other	30	2.8%	21	2.3%	22	2.3%
Total Assignments	1,053	100.0%	903	100.0%	946	100.0%

Placentia Bay is part of a district that shares pilot resources among three ports, that also includes St. John's, NL and Holyrood, NL.

13 Pilots in district 3 APA Owned Pilot Boats:
 8 Boat Crews provided by *Atlantic Pilot* - in service since 2007
 Contractor *Avalon Pilot* - in service since 2007
APA#18 - in service since 1974

2016 Financial Summary

Placentia Bay traffic in 2016 was very strong after a weak 2015. Maintenance shutdowns were as scheduled and average vessel size in the area grew. A small bunker barge began operating mid-way through the year and required pilotage service. Revenues surpassed budget by 12%, a complete reversal of 2015's revenue shortage. Total expenses in the port were within 1% of the budget. With the surcharge revenue excluded, the area finished 2016 with a \$700 thousand profit.

Strait of Canso, NS



Port Description and Navigational Challenges

The Strait of Canso has one of the best deep-water ice-free ports on the eastern coast of North America. The Strait is home to several facilities, including an oil transshipment terminal, a paper products terminal, a coal terminal to provide fuel to a power plant, a general bulk and breakbulk terminal, and an aggregate facility.

The Strait of Canso has exposure on the eastern side to North Atlantic weather, which can cause unpredictable meteorological conditions for the pilots. The oil transshipment terminal receives some very large crude vessels, and these require co-ordination with the tugs needed to dock these ships.

Saint John, NB



Port Description and Navigational Challenges

Saint John moved approximately 26.4 million metric tonnes of cargo in 2016. The city is home to the largest oil refinery in Canada, an LNG import terminal, a container terminal, and two cruise ship terminals. There are several other terminals providing service to forest products, project cargo, dry bulk cargoes such as potash, and liquid bulk such as molasses.

The port of Saint John has several challenges that Pilots must take into consideration. Firstly, the tidal range in the port can be as much as 28 feet (9 metres) from low to high tide. There are also currents caused by the outflow of the Saint John River, which becomes even more challenging in spring with the freshet caused by snow and ice melt. The combination of fresh water from the river mixing with the denser sea water causes an effect known as a density current. And the physical configuration of the harbour, including a narrow gorge at Reversing Falls, contributes to the complex and somewhat unpredictable currents and eddies.

Pilotage Assignments

	2016		2015		2014	
	Assignments	%	Assignments	%	Assignments	%
Tanker	338	51.9%	330	44.1%	250	35.2%
General Cargo Vessels	234	35.9%	304	40.6%	380	53.4%
Other	79	12.1%	115	15.3%	81	11.4%
Total Assignments	651	100.0%	749	100.0%	711	100.0%

The Strait of Canso is part of a district that includes Sydney and Bras d'Or that shares pilot resources among all three ports.

9 Pilots in district

Pilot Boats and Boat Crews provided by Contractor

2016 Financial Summary

General cargo vessels have declined in the area with a decline in coal transshipment activity. These vessels were some of the larger revenue assignments in the strait for the Authority. The number of larger tankers has increased in the area with a loss of assignments on a small bunker tanker. This adjustment to the traffic mix resulted in revenues being 5% over budget. Total expenses were 4% over budget due to the allocation of pilot costs within the Cape Breton district. The area finished 2016 with a \$97 thousand loss, when the surcharge is excluded.

Pilotage Assignments

	2016		2015		2014	
	Assignments	%	Assignments	%	Assignments	%
Tanker	993	61.9%	1,141	64.1%	1,195	68.3%
Container Ship	215	13.4%	185	10.4%	184	10.5%
Other	182	11.3%	164	9.2%	107	6.1%
Cruise Ship	127	7.9%	120	6.8%	99	5.7%
General Cargo Vessels	87	5.4%	169	9.5%	165	9.4%
Total Assignments	1,604	100.0%	1,779	100.0%	1,750	100.0%

9 Pilots 8 Boat Crew

2 APA Owned Pilot Boats:

Captain A. G. Soppitt - In service since 2013

Fundy Pilot - In service since 2005, built in 1984

2016 Financial Summary

Early in 2016 it was announced that the potash mine in the area would cease operation, reducing the area's cargo vessel traffic. For a second consecutive year, there was an extended maintenance slow-down at the refinery in the fourth quarter and the area was left 11% below budget in pilotage revenues. Expenses in the port were 7% under budget with savings in pilot salaries and benefits, and in pilot boat expenses. With the surcharge revenues excluded, the area finished with an \$89 thousand loss.

YEAR IN REVIEW 2016

Financial Overview

The Atlantic Pilotage Authority had a profit in 2016 after two consecutive years of losses. Revenues fell short of expectations by less than 1% due to a decrease in revenues raised through the fuel charge. After experiencing a decline in the average size of vessels in the previous year, that average increased again in 2016. The largest component of the Authority's tariff revenue is based on the size of vessels measured in pilotage units. Total expenses decreased by 1.4% from the previous year and were 2.7% under budget. The largest decreases were in staff salaries and benefits, pilot boat operating costs, and professional and special services.

The following discussion regarding the amount of activity in individual ports is referring to pilotage assignments only, and not the level of cargo or vessel traffic experienced by a port. There are several factors that may result in a difference between the activity reported by the Authority and that reported by another body such as a port authority. These factors include ships not subject to compulsory pilotage, ships utilizing mariners who have pilotage certificates, and the amount of cargo carried on a ship. The Authority reports on pilotage assignments performed by its pilots, but does not track the amount of cargo being carried on a vessel.

Budgets are established during the development of the Authority's Corporate Plan based on a forecast of vessel activity for the following year. Management conducts several meetings with stakeholders to discuss service and financial issues, including traffic expectations and tariff requirements. The projections for the coming year are established in late spring and early summer.

Budget projections begin with an estimate of the number and type of ships expected to call at Atlantic Canadian ports. Foreign flagged ships make up the majority of the vessels served by the Authority - in 2016 foreign vessels made up 79% of the assignments and corresponding revenues. The Authority was forecasting an increase in activity for 2016 with the trend to smaller vessels expected to continue. Instead, the Authority had 7,959 pilotage

assignments during the year, which was under the budget by 505 assignments or 6.0%. The actual number of assignments decreased from 2015 by 389 assignments, a 4.7% decrease. However, the average vessel size increased by 32 units per assignment, or 7.9%, to 436 pilotage units per assignment in 2016.

Cumulatively, over the past five years, the actual assignments have been 97.4% of the budgeted assignments.

The table below provides a breakdown by major category of the assignments for 2016, with comparisons to the two prior years.

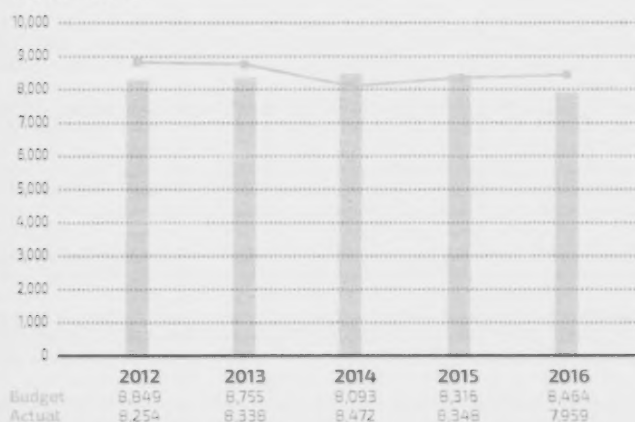
Number of Assignments 2014-2016

	2016		2015		2014	
	Assignments	%	Assignments	%	Assignments	%
Tanker	3,114	39%	3,230	39%	3,413	40%
General Cargo Vessel	1,787	23%	2,086	25%	2,035	24%
Container Ship	1,363	17%	1,197	14%	1,092	13%
Other	962	12%	1,012	12%	1,203	14%
Cruise Ship	733	9%	823	10%	729	9%
Total	7,959	100%	8,348	100%	8,472	100%

Maintenance at facilities related to offshore oil extraction or oil refining can have a significant impact on the Authority. Maintenance in Placentia Bay, NL and Saint John, NB was detrimental to the finances of the Authority in 2015. An extended maintenance slowdown at the refinery in Saint John had a similar effect in the area in 2016. Announcements were made early in the year regarding the suspension of operations at both the potash mine in Saint John and the gypsum mine in Bras d'Or, NS. This reduced general cargo activity in both of those compulsory areas. Halifax, NS has had an increase in large container vessels due to additional calls that began in September of 2015.

Ship masters who have the required experience, and have passed a certificate examination, have the ability to pilot their own vessels in their designated areas. This has contributed to the decline in pilotage assignments, particularly in the port of St. John's NL, with a lesser impact on the port of Halifax. In 2016, 1,678 movements were conducted by certificated masters, as compared to 1,465 in 2015.

Budgeted and Actual Pilotage Assignments 2012-2016



Revenues 2014-2016 (in thousands of dollars)

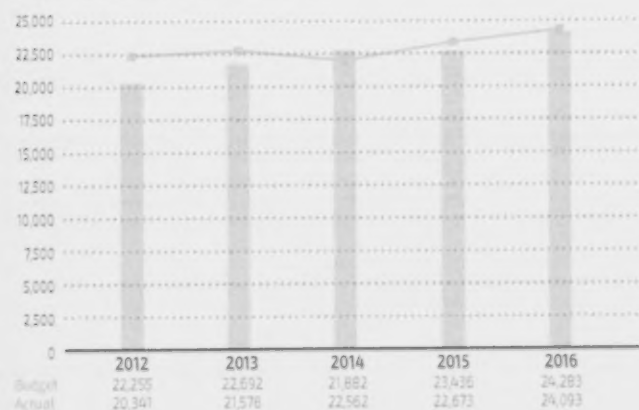
	2016		2015		2014	
	Revenues	%	Revenues	%	Revenues	%
Tanker	12,409	52%	11,062	49%	11,620	52%
General Cargo Vessel	4,310	18%	4,849	21%	4,598	20%
Container Ship	3,678	15%	2,981	13%	2,496	11%
Other	1,910	8%	1,756	8%	2,024	9%
Cruise Ship	1,760	7%	1,974	9%	1,745	8%
Total	24,067	100%	22,622	100%	22,483	100%

The Authority provides pilotage service in 17 compulsory ports. These compulsory ports provide 97.8% of the pilotage revenue, with the remaining revenue provided by non-compulsory ports.

In 2016, tankers accounted for 52% of revenues (49% in 2015 and 52% in 2014). A variation in tanker assignments has the largest impact on revenue of all vessel types. These vessels tend to be much larger than average, and therefore attract higher average revenue than other ships. In some ports that rely heavily on tanker activity, such as Strait of Canso, NS and Placentia Bay, the pilotage is more challenging in terms of the distance, the length of time under the conduct of a pilot, and the requirement to have more robust pilot vessels. As a result, the cost to provide the required service is higher than in other ports. The average revenue per assignment must also be higher to pay for the service in these ports.

The Authority's revenue for 2016 was 0.8%, or \$190 thousand, under budget. The following chart indicates the budgeted and actual revenue for each of the last five years. During this period, the cumulative actual revenue has been 97.1% of cumulative budgeted revenue.

Budgeted and Actual Revenue 2012-2016 (in thousands of dollars)



The Authority provides pilotage service in 17 compulsory ports. These compulsory ports provide 97.8% of the pilotage revenue, with the remaining revenue provided by non-compulsory ports.

Compulsory Port Revenue

Four major ports provided 82.5% of the revenue from compulsory ports in 2016. The largest revenue contribution came from Placentia Bay at 28.1%. Halifax was the next largest contributor with 26.3%, while Saint John had 17.8%, and Canso 10.3% of the total compulsory

revenue. The remaining thirteen compulsory ports provided the residual 17.5% of revenue, with St. John's having the largest share of these ports. The following chart provides a graphic illustration of the revenue contribution of ports.

Percentage of Compulsory Pilotage Revenue by Port 2016



Placentia Bay is a large revenue generator for the Authority and an area where significant investment has been made in pilot boats and in increasing the number of pilots. The traffic in the area is generated primarily from two major oil industry customers- the oil refinery at Come-by-Chance, and the transshipment terminal at Whiffen Head. The refinery completed a planned maintenance shutdown in 2016 without having as severe an effect for the Authority as experienced in 2015. Traffic was 11.0% over budget for the year. Due to the increased activity on larger vessels the revenues in the area were 11.9%, or \$702 thousand over the 2016 budget.

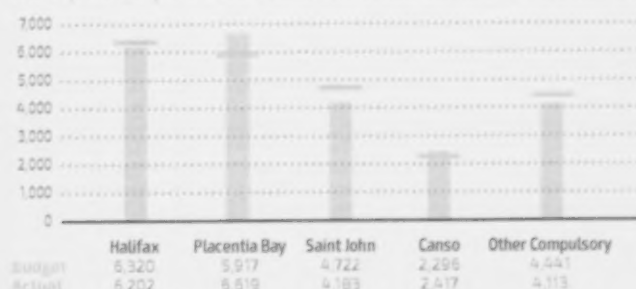
Halifax is also a large revenue producer as it is the Authority's busiest port. The port has had a decline in pilotage assignments due to a reduction in general cargo assignments and in tanker assignments. In both categories, part of the decline was due to an increase in certificated masters. These declines have been partially offset by a 12.1% increase in container traffic in 2016. Halifax has continued seeing an increase in large container vessels that began in 2015. Total pilotage activity in the port was 6.7% under budget with revenues just 1.9%, or \$118 thousand, under budget.

For a second consecutive year, there was an extended maintenance project at the refinery in Saint John that caused a reduction in the number of tanker assignments. The area also had a decline in general cargo assignments due to the suspension of operations at the newly developed potash mine in nearby Sussex. The Authority had been anticipating increased production from this new mine. These declines were offset to some degree by increases in container ship traffic, cruise ship calls, and tug and barge assignments. The average size of ships has been larger than projected in the budget and from the previous year, resulting in a higher average tariff per assignment. The pilotage assignments for the port finished 14.6% under budget with the corresponding revenues 11.4%, or \$539 thousand, under budget.

In the Strait of Canso, tanker traffic has been similar to 2015 levels. Smaller, lower revenue, vessels that increased traffic levels in Canso in 2015 have stopped transiting the area. Larger tankers offset this revenue loss in 2016. A coal transshipment (vessel to vessel) operation in the area has decreased operations due to a reduced global demand for the commodity, and the low world market prices of coal. Strait of Canso assignments were 4.0% under budget, but with an increased average vessel size. The end result was that the 2016 revenues for the area were 5.3%, or \$121 thousand, over budget, despite the decline in activity.

The chart below illustrates the actual and budgeted revenue in compulsory areas for 2016.

Comparison of Budgeted and Actual Revenue in Compulsory Areas 2016 (in thousands of dollars)



As previously mentioned, the Authority had expenses fall 2.7% under budget. The Authority has invested in more robust equipment and in additional preventative maintenance for its pilot boats. This contributed to a 31.9% decline in repair costs in 2016. Staffing changes in administration resulted in an 11.1% decline in staff salaries and benefits. Targeted savings were planned for professional and special services, which includes board costs, legal fees, and Transport Canada fees. This category of costs was reduced by 17.4% as compared to 2015 levels. These were the major factors that caused a 1.4% decline in total expenses and for expenses to finish the year under budget.

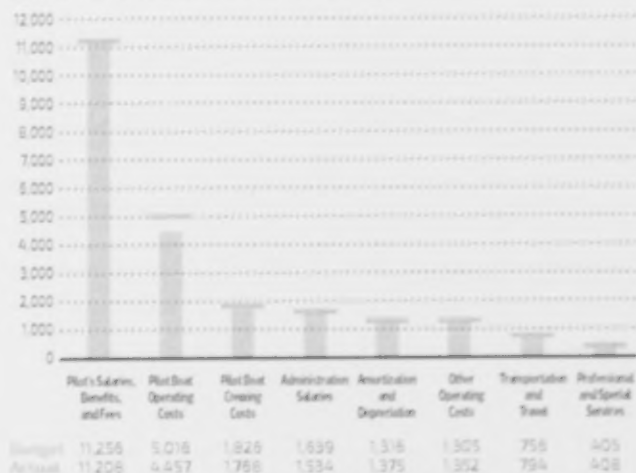
Pilots' fees, salaries, and benefits includes all costs associated with the remuneration to employee pilots, as well as shares paid to entrepreneurial pilots who service smaller ports with inconsistent traffic levels. The entrepreneurial pilots receive a portion, or share, of the pilotage revenue in their ports thus limiting the Authority's exposure to traffic pattern changes.

The Authority has an agreement in place with its employee pilots that encourages them to provide a firm retirement date. As a result, the Authority has received notice from eight pilots committing to a firm retirement date since 2013, most being two years in advance of retirement. This has allowed the Authority to hire replacement pilots where necessary. While there is a short-term cost for this in carrying more salary, in the long term it allows the Authority to have the right number of pilots to provide the service required by its customers. Due to the level of hiring recently, the schedule of additional apprentice pilots was slowed to allow proper training of those already added. This resulted in lower than budgeted pilot costs.

The savings in pilot boat maintenance with lower than expected fuel prices combined to create substantial savings under pilot boat operating costs. The fuel costs are recovered directly through a fuel charge, thus causing equivalent reductions in revenues. Transition in the workforce meant fewer fulltime equivalents were on staff during the year when compared to the budget. An internal promotion of a deckhand to launchmaster left a position staffed by a casual employee until a competition was held and the permanent position filled. A restructuring of the positions in administration and dispatch resulted in savings that are expected to continue as administration salaries fall back to the historical norm after a high in 2015. Amortization and depreciation increased as the Authority has accelerated its planned deployment of portable navigational devices. Transportation and travel remain high with the number of pilots who continue to do training assignments. As previously mentioned, savings have been achieved with reduced legal fees and other professional and special services.

The following chart indicates the budgeted expenditures against the actual expenditures for 2016, expressed in thousands of dollars.

Comparison of Budgeted and Actual Expenses 2016 (in thousands of dollars)



The Authority budgeted a 2.1% profit margin on expected income of \$24.0 million for 2016, when the surcharge is excluded. Due primarily to the cost reductions discussed above, the Authority finished 2016 with a 3.9% profit on \$23.8 million of income. The surcharge added an additional \$278 thousand in revenue and 1.1% to the profit margin.

The Authority had a capital budget of \$2.7 million for 2016. The actual capital expenditure in 2016 was \$686 thousand. The Authority is in the process of sourcing quality used vessels. This multi-year project had a portion budgeted for 2016, but the vessels were not purchased by year-end. There were extensive upgrades budgeted to be made on the Placentia Bay vessels as the transmissions were failing, but the portion of this work that was anticipated to fall into 2016 was completed late in 2015. Other vessels were dry docked in 2016 with various amounts of work done on each vessel and with much of this work capitalized. Projects related to wharves and structures continue to be postponed while options regarding the location of pilot boats in Halifax and Placentia Bay are studied. The Authority had an engineering firm do a survey of the Herring Cove breakwater and related Government wharf outside Halifax and is weighing the recommendations to determine the investment required to keep the facilities operational. After successful testing of portable navigational devices, the Authority expanded the use of tablets for its pilots and accelerated the timing of their deployment.

The capital expenditure budget and actual expenditures for 2016 are indicated in the following chart.

Budgeted and Actual Capital Expenditures, 2016 (in thousands of dollars)

	Budgeted	Actual
Purchase of pilot boats	1,500	—
Pilot boat refit and equipment	725	490
Wharves and structures	385	27
Computer equipment and furniture	77	130
Computer software	24	39
Year end total	2,731	686

COMPULSORY PILOTAGE AREAS



The *Pilotage Act* has defined the Atlantic Pilotage Authority's area of operation as all the Canadian waters in and around the provinces of New Brunswick, Prince Edward Island, Nova Scotia, and Newfoundland and Labrador, as indicated on the map. Within this region, the Authority has designated 17 compulsory pilotage areas.

The Authority has identified other areas in which there is some commercial activity. Pilotage in these areas is not compulsory. The Authority has issued pilot licences for these areas, and will attempt to provide pilotage service subject to availability of pilots and providing there is no impact on the compulsory pilotage service.

Selected Data from Compulsory Areas

Assignments	2016	2015	2014
New Brunswick			
Saint John	1,604	1,779	1,750
Miramichi	11	13	2
Restigouche	4	10	7
Newfoundland and Labrador			
Voisey's Bay	14	12	12
Western NL			
Humber Arm	184	185	208
Stephenville	9	16	16
Bay of Exploits	104	99	151
Eastern NL			
St. John's	598	594	855
Holyrood	38	30	39
Placentia Bay	1,053	903	946
Nova Scotia			
Halifax	2,644	2,787	2,760
Cape Breton Region			
Strait of Canso	651	749	711
Sydney	314	334	347
Bras d'Or	4	48	34
Pugwash	80	103	80
Prince Edward Island			
Charlottetown	252	270	215
Confederation Bridge	112	130	64
Non-Compulsory Areas	283	286	280
Total	7,959	8,348	8,472

ON THE HORIZON 2017 and Beyond

Pilot Boats

The Authority continues its pilot boat replacement project. In the past ten years, four state of the art vessels have been constructed; two of these boats were for Placentia Bay, NL, and one each for Halifax, NS and Saint John, NB. The Authority had examined several vessel design options to determine if there were superior vessels that would provide a stable and robust platform for the pilots while reducing maintenance costs and down time. The current focus is to search for used vessels that are under ten years of age that could serve as either primary or backup vessels in a port, depending on the age and specifications of the vessels found.

Business Prospects

The Authority actively monitors economic developments for the region as proposed new projects or adjustments to current operations greatly affects the finances of the Authority and the resources required to serve the stakeholders.

Since the latter half of 2015, there has been a trend for increased container ship traffic in Halifax. As well as an increase in the number of ships, there has been an increase in the average size of the vessels. It is expected that this trend will continue in the foreseeable future, as the Port of Halifax readies itself for the next generation of container vessels and one long term caller is deploying a new fleet of much larger vessels than its previous generation of ships. Perhaps the largest increase in activity in Halifax will be in cruise vessels, with Halifax expecting approximately 180 ships in 2017, a 25% increase over 2016.

Cruise traffic in Saint John continues modest growth, with the increase in passengers coming from larger ships rather than more ships. The proposed Energy East Pipeline project, which proposes to extend the Trans Canada Pipeline to a terminal at Saint John and export oil from that facility, would provide a significant increase in shipping at Saint John. On the Chaleur Bay, the APA has recommended that Belledune, NB become compulsory as previously mentioned. On the south coast of the Gaspé peninsula, the APA is monitoring the development of a cement plant at Port Daniel to determine whether a PRMM is required in that area to determine whether compulsory pilotage is warranted.

In Placentia Bay, the oil refinery in Come-by-Chance continues to improve its efficiency and production while also launching a bunker barge operation. The transshipment terminal at Whiffen Head expects to receive oil from the Hebron project when it begins producing in late 2017. This will provide a boost in shipping in the following years, and will provide an ongoing supply when output from other projects taper off.

The dredging of the harbour in 2012 provides Sydney, NS with the opportunity to attract larger ships. There is interest in developing a container terminal in the port, and a proposal to develop expanded cruise ship berthing to allow accommodation of two large cruise ships alongside. The cruise industry is expected to increase over the next few years, with 93 calls expected in 2017 compared to 54 calls in 2016.

There are two proposals for LNG export facilities in Nova Scotia, one at Goldboro on the Eastern Shore, and the other at Bear Head in the Strait of Canso. The APA is monitoring the development of both projects.

Plans are proceeding for a new container terminal at the Strait of Canso, as lands for the project have been purchased. It is estimated that the terminal could be operational within 26 months of the beginning of

the construction period. NuStar Energy renewed a long-term contract for storage capacity in the Point Tupper. Pilotage traffic related to the product stored at the facility is influenced greatly by world oil markets and prices. NuStar has proposed that the Energy East Pipeline, currently planned to end in Saint John, be extended to their Canso facility where the oil could be stored and then exported by ship to Europe and Asia.

Economics

The revenues of the Authority are influenced by the amount of marine traffic, and the composition of that traffic in terms of size and types of vessels. The annual traffic levels are mainly driven by the economics of the marine industries of the Atlantic region. Forecasting the traffic for future years is very challenging as there are many factors involved, all of which are well outside the Authority's control.

When creating the Corporate Plan for 2017-2021, the Authority used several sources of information to predict traffic levels. The traffic patterns of previous years were combined with changes within individual business sectors, announced or expected expansions or contractions, and general financial conditions. The Authority also reached out to stakeholders, including the marine industry and port authorities, during consultation meetings and direct communications, to solicit feedback on projected changes to future volumes or activity.

Changes in the energy sector, especially oil, and other commodities have the largest effect on the Authority's activity. With fifty percent of the revenues generated by the oil industry, fluctuations in demand, or any changes in the methods of crude oil delivery, can greatly affect the financial results of the Authority. The container business is highly competitive and cost sensitive. In anticipation of the opening of the expanded Panama Canal, these factors have led to container industry consolidation and a shift to larger vessels. Ports that can accommodate these larger vessels are expected to have growth from this sector. A weaker Canadian dollar has meant growth in tourism and expected growth in cruise activity in several ports for the Authority.

The Authority is projecting a growth in activity and is budgeting based on 8,119 assignments. For 2017, the Authority is budgeting a profit of \$881 thousand, or a 3.5% return on revenue. The budget for 2018 is for a \$1.221 million profit, or a 4.7% return on revenue. These results include revenues raised by the surcharge that will expire in 2019.

Tariff Adjustments for 2017 and 2018

After reviewing the performance of each port, the Authority proposed two stages of tariff amendments. The rates are set on a port-by-port basis, with thirteen compulsory ports effected in 2017 and twelve effected in 2018. Other non-compulsory areas are also having rates increased in each of these years. Combined, the changes are estimated to increase the overall tariff rates by 4.12% in 2017 and 3.33% in 2018.

The Authority continues to review the service requirements of customers in each major port to determine the operational requirements in relation to the number or availability of pilots and pilot boats. The customers have indicated that service is paramount, and they have requested that the workforce be maintained or increased to provide the level of service they require. The APA has taken the requirements of the customers into account in determining its tariff requirements. These increases are intended to support the costs associated with the desired pilot strength, pilot technology, and the costs related to the addition of two pilot boats.

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

The accompanying financial statements have been prepared by the Authority's management in accordance with International Financial Reporting Standards, using management's best estimates and judgments, where appropriate. Management is responsible for the integrity and objectivity of the information in the financial statements and annual report.

Management is also responsible for developing and maintaining a system of internal control which is designed to provide reasonable assurance that assets are safeguarded and controlled, transactions comply with relevant authorities and accounting systems provide timely, accurate financial information.

The Authority's management is responsible for conducting its affairs in compliance with the *Pilotage Act* and regulations, Part X of the *Financial Administration Act* and regulations, the by-laws of the Authority and the directive issued under section 89 of the *Financial Administration Act*.

The Members of the Authority are responsible for ensuring that management fulfils its responsibilities for financial reporting and internal control. These responsibilities are delegated to the Audit Committee. The Audit Committee meets with management and the auditors to satisfy itself that responsibilities are properly discharged and to review the financial statements. The financial statements and annual report are reviewed and approved by the Members of the Authority on the recommendation of the Audit Committee.

The Auditor General of Canada conducts an independent audit of the transactions and financial statements of the Authority in accordance with Canadian generally accepted auditing standards, and expresses his opinion on the financial statements. He has full and free access to the Audit Committee of the Authority, and his report follows.



Sean Griffiths
Chief Executive Officer



Peter MacArthur, CPA, CMA
Chief Financial Officer

Halifax, Canada
March 6, 2017



INDEPENDENT AUDITOR'S REPORT

To the Minister of Transport

Report on the Financial Statements

I have audited the accompanying financial statements of the Atlantic Pilotage Authority, which comprise the statement of financial position as at 31 December 2016, and the statement of comprehensive income (loss), statement of changes in equity and statement of cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control.

An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

Opinion

In my opinion, the financial statements present fairly, in all material respects, the financial position of the Atlantic Pilotage Authority as at 31 December 2016, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards.

Report on Other Legal and Regulatory Requirements

As required by the *Financial Administration Act*, I report that, in my opinion, the accounting principles in International Financial Reporting Standards have been applied on a basis consistent with that of the preceding year.

Further, in my opinion, the transactions of the Atlantic Pilotage Authority that have come to my notice during my audit of the financial statements have, in all significant respects, been in accordance with Part X of the *Financial Administration Act* and regulations, the *Pilotage Act* and regulations, the by-laws of the Atlantic Pilotage Authority, and the directive issued pursuant to section 89 of the *Financial Administration Act*.

Heather McManaman, CPA, CA
Principal
for the Auditor General of Canada

6 March 2017
Halifax, Canada

STATEMENT OF FINANCIAL POSITION



Atlantic Pilotage
Authority

Administration de Pilotage
de l'Atlantique

As at December 31, 2016
(in thousands of Canadian dollars)

	2016	2015
Assets		
Current		
Cash	\$ 2,083	\$ 329
Trade and other receivables (Notes 6 and 7)	2,902	3,181
Prepaid expenses	71	84
Other assets	—	12
	5,056	3,606
Non-current		
Intangible assets (Note 8)	184	206
Pilot boats and equipment (Note 9)	9,455	10,168
	9,639	10,374
	\$ 14,695	\$ 13,980
Liabilities		
Current		
Trade and other payables (Notes 6 and 7)	\$ 1,695	\$ 1,661
Bank loans (Notes 7 and 10)	449	435
Employee severance benefits (Note 12)	83	128
	2,227	2,224
Non-current		
Bank loans (Notes 7 and 10)	3,333	3,782
Employee severance benefits (Note 12)	1,386	1,419
	4,719	5,201
	6,946	7,425
Equity		
Retained earnings	7,749	6,555
	7,749	6,555
	\$ 14,695	\$ 13,980

Commitments (Note 16)

The accompanying notes are an integral part of these financial statements.

Approved by the Members of the Authority and authorized for issue on March 6, 2017:

Alisa Aymon
Member

Patricia J. Mella
Member

STATEMENT OF COMPREHENSIVE INCOME (LOSS)



Atlantic Pilotage
Authority

Administration de Pilotage
de l'Atlantique

For the year ended December 31, 2016
(in thousands of Canadian dollars)

	2016	2015
Revenues		
Pilotage charges (Note 14)	\$ 24,067	\$ 22,622
Other income	26	51
	24,093	22,673
Expenses		
Pilots' fees, salaries and benefits	11,208	11,091
Pilot boats, operating costs	4,457	4,667
Pilot boat crews' salaries and benefits	1,768	1,781
Staff salaries and benefits	1,534	1,725
Amortization and depreciation (Notes 8 and 9)	1,375	1,328
Transportation and travel	794	815
Utilities, materials and supplies	502	477
Professional and special services	408	494
Training	313	284
Rentals	280	287
Communications	134	133
Finance costs	123	142
	22,896	23,224
Income (loss) for the year	1,197	(551)
Other comprehensive loss		
Amounts not to be reclassified subsequently to net income:		
Actuarial loss on employee severance benefits	(3)	(36)
Other comprehensive loss	(3)	(36)
Comprehensive income (loss)	\$ 1,194	\$ (587)

The accompanying notes are an integral part of these financial statements.

STATEMENT OF CHANGES IN EQUITY

For the year ended December 31, 2016
(in thousands of Canadian dollars)

	2016	2015
Retained earnings, beginning of the year	\$ 6,555	\$ 7,142
Income (loss) for the year	1,197	(551)
Other comprehensive loss	(3)	(36)
Total comprehensive income (loss)	1,194	(587)
Retained earnings, end of the year	\$ 7,749	\$ 6,555

The accompanying notes are an integral part of these financial statements.

STATEMENT OF CASH FLOWS

For the year ended December 31, 2016
(in thousands of Canadian dollars)

	2016	2015
Operating Activities		
Receipts from customers	\$ 24,233	\$ 22,752
Payments to and on behalf of employees	(14,458)	(15,031)
Payments to suppliers	(6,712)	(6,955)
Finance costs paid	(123)	(142)
Other income received	26	51
Net cash provided by operating activities	2,966	675
Investing Activities		
Purchases of intangible assets	(39)	(15)
Purchases of pilot boats and equipment	(750)	(1,063)
Proceeds from sale of equipment	12	—
Net cash used in investing activities	(777)	(1,078)
Financing Activities		
Repayment of bank loans	(435)	(417)
Net cash used in financing activities (Note 10)	(435)	(417)
Increase (decrease) in cash	1,754	(820)
Cash, beginning of the year	329	1,149
Cash, end of the year	\$ 2,083	\$ 329

The accompanying notes are an integral part of these financial statements.

NOTES TO THE FINANCIAL STATEMENTS

December 31, 2016

(in thousands of Canadian dollars)



Atlantic Pilotage
Authority

Administration de Pilotage
de l'Atlantique

1. Objectives and Activities

The Atlantic Pilotage Authority (the "Authority") was established in 1972 pursuant to the *Pilotage Act*. The principal registered address of the Authority is 2000 Barrington Street, Halifax, Nova Scotia. The objects of the Authority are to establish, operate, maintain, and administer a safe and efficient pilotage service within designated Canadian waters. The *Pilotage Act* provides that pilotage tariffs shall be fair, reasonable, and sufficient to permit the Authority to operate on a self sustaining financial basis. Under the *Pilotage Act*, no payment to the Authority may be made under an appropriation by Parliament to discharge an obligation or liability.

The Authority is a Crown corporation listed in Schedule III, Part I of the *Financial Administration Act* and is not subject to the provisions of the *Income Tax Act*.

In July 2015, the Authority was issued a Directive (PC 2015-1114) pursuant to section 89 of the *Financial Administration Act* to align its travel, hospitality, conference and event expenditure policies, guidelines and practices with the Treasury Board policies, directives and related instruments on travel, hospitality, conference and event expenditures in a manner that is consistent with its legal obligations, and to report on the implementation of this directive in the Authority's next corporate plan. The Authority is revising its policy on travel, hospitality, conference and events as it works towards full compliance with the directive.

2. Regulation of Pilotage Charges

The approval process for setting tariffs for pilotage charges is set out in the *Pilotage Act*. The Authority, with the approval of the Governor in Council, makes regulations prescribing tariffs. The Authority must publish proposed tariffs in the *Canada Gazette* and any interested party who has reason to believe that a proposed tariff is prejudicial to the public interest may file a notice of objection, setting out the grounds therefor, with the Canadian Transportation Agency (CTA) within thirty days following publication of the proposed tariff.

The CTA must investigate the proposed pilotage charge set out in the notice of objection. Once its investigation is complete, the CTA must make a recommendation within 120 days following the receipt of the notice of objection, and the Authority must govern itself accordingly.

The tariffs may come into force 30 days after publication in the *Canada Gazette*. However, where the CTA recommends a pilotage charge that is lower than that prescribed by the Authority, the Authority is required to reimburse the difference between this charge and the charge recommended by the CTA, with interest, to any person who has paid the prescribed charge. The Governor in Council may vary or rescind a recommendation of the CTA.

3. Significant Accounting Policies

(a) Basis of presentation

These financial statements have been prepared by management in accordance with International Financial Reporting Standards (IFRS), as issued by the Accounting Standards Board (AcSB).

(b) Cash

Cash represents cash on hand and Canadian dollar deposits held at Canadian chartered banks.

(c) Financial instruments

Trade and other receivables and trade and other payables, classified as other financial liabilities, are measured at amortized cost using the effective interest method. Due to their short-term nature, the cost of these financial instruments approximates their fair value.

Bank loans are classified as other financial liabilities and are initially measured at fair value. After initial recognition, bank loans are measured at amortized cost using the effective interest method.

The Authority is not party to any derivative financial instruments or hedges.

(d) Intangible assets

The Authority's intangible assets are comprised of purchased software. When the software does not form an integral part of the machinery or computer hardware to which it relates, it is separately accounted as an intangible asset. Intangibles are carried at cost less accumulated amortization and impairment losses.

Any impairment is recognized as an expense in comprehensive income and is measured as the amount by which the carrying amount exceeds its recoverable amount.

(e) Pilot boats and equipment

Pilot boats and equipment are recorded at cost. The cost of pilot boats under construction includes design, project management, legal, material, direct labour, and interest on construction loans. Amounts included in pilot boats under construction are transferred to the appropriate pilot boat classifications upon completion, and depreciation commences.

Any impairment is measured as the amount by which the carrying amount exceeds its recoverable amount and is recognized as a loss for the year. Gains or losses arising on the disposal of pilot boats and equipment are determined as the difference between the disposal proceeds and the carrying amount of the assets and are recognized in profit or loss. Gains are recognized in other income, while losses are recognized as a loss for the year in pilot boats, operating costs, or utilities, materials and supplies depending on the assets that were disposed.

(f) Employee severance benefits

Employees are entitled to specified severance benefits as provided for under collective agreements or employment contracts, based on their years of service and final salary. The liability for these payments is estimated and recorded in the accounts as the benefits accrue to the employees.

The costs and the benefit obligation are actuarially determined using the projected unit credit method prorated on service that incorporates management's best estimate of the rate of employee turnover, retirement age, future salary and benefit levels, and other actuarial factors.

Actuarial gains and losses are recognized in other comprehensive income in the period in which they occur and flow into retained earnings.

(g) Pension plan

Substantially all of the employees of the Authority are covered by the Public Service Pension Plan (the "Plan"), a defined benefit plan established through legislation and sponsored by the Government

of Canada. Contributions are required by both the employees and the Authority to cover current service cost. Pursuant to legislation currently in place, the Authority has no legal or constructive obligation to pay further contributions with respect to any past service or funding deficiencies of the Plan. Consequently, contributions are recognized as an expense in the year when employees have rendered service and represent the total pension obligation of the Authority.

(h) Revenue recognition

Revenues from pilotage charges are recognized when pilotage services are provided.

4. Accounting Standards and Amendments Issued but not yet Effective

Accounting standards and amendments issued but not yet effective which are expected to be relevant to the Authority include:

In July 2014, the International Accounting Standards Board (IASB) issued the complete version of IFRS 9, "Financial Instruments", first issued in November 2009, which brings together the classification and measurement, impairment and hedge accounting phases of the IASB's project to replace IAS 39 Financial Instruments: Recognition and Measurement. IFRS 9 introduces a principles-based approach to the classification of financial assets based on an entity's business model and the nature of the cash flows of the asset. The mandatory effective date of IFRS 9 is January 1, 2018.

In May 2014, the IASB issued IFRS 15, "Revenue from Contracts with Customers", which establishes principles for reporting about the nature, amount, timing and uncertainty of revenue and cash flows arising from an entity's contracts with customers. The mandatory effective date of IFRS 15 is January 1, 2018.

In January 2016, the IASB issued IFRS 16, "Leases", which sets out the principles that both parties to a contract apply in order to provide relevant information about leases in a manner that faithfully represents those transactions. IFRS 16 requires all leases to be reported on the lessee's balance sheet. There are also changes in accounting over the life of the lease. In particular, the lessee will recognize a front-loaded pattern of expense for most leases, even when it pays constant annual rentals. Leases that are less than 12 months in duration, or that are for a low dollar value items, are not required to be capitalized. Lessors' accounting treatment remains similar to current practice. They continue to classify leases as finance and operating leases. The mandatory effective date of IFRS 16 is January 1, 2019.

The Authority has not early adopted any of these new standards and amendments and is currently assessing the impact that these standards will have on its financial statements. Therefore, the impact is not known at this time.

5. Use of Estimates and Judgments

The preparation of financial statements requires management to make judgments, estimates and assumptions that affect the application of policies and reported amounts of assets and liabilities, and revenue and expenses. The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making the judgments about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised.

(a) Critical accounting estimates

Critical accounting estimates are estimates and assumptions made by management that may result in material adjustments to the carrying amount of assets and liabilities within the next year. Management has made the following critical accounting estimates or assumptions in preparation of these financial statements:

Amortization and depreciation rates

All the intangible assets are finite. Amortization of intangible assets is charged on a straight-line basis over the estimated useful lives of the assets. The useful lives used in the calculation of amortization for purchased software is 5 to 10 years.

Depreciation of pilot boats and equipment is calculated on a straight line basis and is based on the estimated useful life of the assets as follows:

Pilot boat hulls and structures	10 to 25 years
Pilot boat equipment	5 to 10 years
Pilot boat generators	5 years
Pilot boat engines	5 to 10 years
Pilot boat inspections	4 to 5 years
Furniture and equipment	2 to 10 years
Leasehold improvements	10 years

Useful lives are based on management's estimates of the periods of service provided by the intangible assets and the pilot boats and equipment. The useful lives of these assets are reviewed annually for continued appropriateness. Changes to the useful life estimates would affect future amortization or depreciation expense and the future carrying value of the assets.

Employee severance benefits

The Authority engages an external actuary to assess the fair value of its employee severance benefits. The Authority assesses this obligation at December 31 each year. The plan is sensitive to significant actuarial assumptions, the discount rate, the estimate of salary rate increases, and the assumed age at retirement.

(b) Critical accounting judgments

Critical accounting judgments are accounting policies that have been identified as being complex or involving subjective judgments or assessments.

Impairment test for non-financial assets

The non-financial assets with finite useful lives are required to be tested for impairment only when indication of impairment exists. Management is required to make a judgment with respect to the existence of impairment indicators at the end of each reporting period. Some indicators of impairment that management may consider include changes in the current and expected future use of the asset, external valuations of the assets, and obsolescence or physical damage to the asset.

6. Financial Risk Management

Overview

The Authority has exposure to the following risks from its use of financial instruments:

- credit risk
- liquidity risk
- interest rate risk

This note presents information about the exposure to each of the above risks, including the Authority's objectives, policies, and processes for measuring and managing risk. Further quantitative disclosures are included throughout these financial statements.

The Members of the Authority have overall responsibility for the establishment and oversight of the risk management framework. The Members are responsible for developing and monitoring the Authority's risk management policies.

The Authority's risk management policies are established to identify and analyze the risks faced by the Authority, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Authority's activities. The Authority, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

Credit risk

Credit risk is the risk of financial loss to the Authority if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Authority's receivables from customers.

The carrying amount of cash and trade receivables represents the maximum exposure to credit risk.

There is no significant credit risk with trade receivables as the Pilotage Act stipulates that the owner, master, and agent of a ship are jointly and severally liable for pilotage charges, and the Act provides a mechanism to withhold customs clearance if pilotage charges are unpaid.

The Authority's trade and other receivables had a carrying value of \$2,902 as at December 31, 2016 (2015 - \$3,181). The trade receivables had a carrying value of \$2,672 as at December 31, 2016 (2015 - \$2,792). There is no concentration of trade receivables with any one customer. During 2016, The Authority adjusted its payment terms from payable with 45 days to payable within 30 days. As at December 31, 2016, approximately 69% (2015 - 73%) of trade receivables, net were current, whereas 31% (2015 - 27%) were not current. The Authority incurred losses with respect to bad debts in 2016 of \$79 (2015 - \$2). The Authority's allowance for doubtful accounts was \$18 at December 31, 2016 (2015 - \$11). The Authority's other receivables had a carrying value of \$230 as at December 31, 2016 (2015 - \$389).

Cash is held with a Canadian chartered bank. There has been no assessed change in level of risk exposure of the financial instruments held by the Authority.

Liquidity risk

Liquidity risk is the risk that the Authority will not be able to meet its financial obligations as they fall due. The Authority's approach to managing liquidity risk is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without unacceptable losses or risking damage to the Authority's reputation.

The Authority monitors its cash balances and cash flows generated from operations on a frequent basis to meet its requirements. As part of this plan, the Authority maintains an operating credit facility of \$2,500 (2015 - \$1,500) that is unsecured

and available at an interest rate not to exceed the prime lending rate. The carrying amount of trade and other payables, bank loans, and employee severance benefits represents the maximum exposure to liquidity risk.

The Authority's trade and other payables had a carrying value of \$1,695 as at December 31, 2016 (2015 - \$1,661). The trade payables had a carrying value of \$1,061 as at December 31, 2016 (2015 - \$1,108) and are all due within 60 days. The Authority's accrued liabilities had a carrying value of \$634 as at December 31, 2016 (2015 - \$553).

The Authority has loans with Canadian chartered banks. At December 31, 2016, these bank loans totalled \$3,782 (2015 - \$4,217) as disclosed in Note 10.

Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate due to changes in market interest rates. The Authority has limited exposure to interest rate risk as the bank loans have a fixed interest rate which cannot be changed between maturity dates without financial penalty.

7. Fair Value of Financial Instruments

Trade receivables and trade payables are incurred in the normal course of business and are respectively due and payable on demand. The carrying value of these financial instruments approximates fair value because of their short term to maturity.

Financial instruments that are measured subsequent to initial recognition at fair value are grouped into a hierarchy based on the degree to which the fair value is observable. Level 1 fair value measurements are derived from unadjusted, quoted prices in active markets for identical assets or liabilities. Level 2 fair value measurements are derived from inputs other than quoted prices included within Level 1 that are observable for the asset or liability directly or indirectly. Level 3 fair value measurements are derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data.

The fair value of the bank loans disclosed in Note 10 is a Level 2 fair value measurement. No Level 1 or Level 3 financial instruments are held by the Authority.

8. Intangible Assets

The Authority's intangible assets, which consist of purchased software, at December 31 are:

	2016	2015
Cost, beginning of the year	\$ 565	\$ 550
Additions	39	15
Cost, end of the year	604	565
Accumulated amortization, beginning of the year	(359)	(302)
Amortization for the year	(61)	(57)
Accumulated amortization, end of the year	(420)	(359)
Carrying amount, end of the year	\$ 184	\$ 206

There is no impairment of intangible assets at December 31, 2016 (2015 - nil).

9. Pilot Boats and Equipment

2016	Pilot boat hulls and structures	Pilot boat equipment	Pilot boat generators	Pilot boat engines	Pilot boat inspections	Furniture and equipment	Leasehold improvements	Total
Cost, beginning of the year	\$ 9,729	\$ 4,477	\$ 390	\$ 2,142	\$ 645	\$ 1,053	\$ 174	\$ 18,610
Additions	—	309	31	121	21	165	—	647
Disposals	—	(238)	(29)	(116)	(16)	(32)	—	(431)
Cost, end of the year	9,729	4,548	392	2,147	650	1,186	174	18,826
Accumulated depreciation, beginning of the year	(3,276)	(2,051)	(243)	(1,617)	(408)	(674)	(173)	(8,442)
Depreciation of disposals during the year	—	217	23	101	16	28	—	385
Depreciation for the year	(387)	(422)	(28)	(192)	(168)	(116)	(1)	(1,314)
Accumulated depreciation, end of the year	(3,663)	(2,256)	(248)	(1,708)	(560)	(762)	(174)	(9,371)
Carrying amount, end of the year	\$ 6,066	\$ 2,292	\$ 144	\$ 439	\$ 90	\$ 424	\$ —	\$ 9,455

2015	Pilot boat hulls and structures	Pilot boat equipment	Pilot boat generators	Pilot boat engines	Pilot boat inspections	Furniture and equipment	Leasehold improvements	Total
Cost, beginning of the year	\$ 9,712	\$ 3,951	\$ 390	\$ 2,133	\$ 585	\$ 1,005	\$ 174	\$ 17,950
Additions	28	833	96	16	77	87	—	1,137
Disposals	(11)	(307)	(96)	(7)	(17)	(39)	—	(477)
Cost, end of the year	9,729	4,477	390	2,142	645	1,053	174	18,610
Accumulated depreciation, beginning of the year	(2,896)	(1,860)	(308)	(1,434)	(291)	(599)	(168)	(7,556)
Depreciation of disposals during the year	8	237	96	4	17	23	—	385
Depreciation for the year	(388)	(428)	(31)	(187)	(134)	(98)	(5)	(1,271)
Accumulated depreciation, end of the year	(3,276)	(2,051)	(243)	(1,617)	(408)	(674)	(173)	(8,442)
Carrying amount, end of the year	\$ 6,453	\$ 2,426	\$ 147	\$ 525	\$ 237	\$ 379	\$ 1	\$ 10,168

There is no impairment of pilot boats and equipment at December 31, 2016 (2015 – nil).

10. Bank Loans

The Authority's outstanding bank loans at December 31 are:

	2016	2015
Non-revolving term facility, payable in monthly instalments including interest at 3.28%, amortized over 10 years, term ending on September 21, 2022, unsecured.	\$ 1,380	\$ 1,595
Non-revolving term facility, payable in monthly instalments including interest at 2.93%, amortized over 10 years, term ending on January 21, 2023, unsecured.	719	826
Non-revolving term facility, payable in monthly instalments including interest at 2.96%, amortized over 15 years, term ending on January 12, 2019, unsecured.	1,683	1,796
	\$ 3,782	\$ 4,217
Current portion	\$ 449	\$ 435
Non-current portion	3,333	3,782
	\$ 3,782	\$ 4,217

Interest expense on loans amounted to \$123 (2015 – \$142). As at December 31, 2016, the fair value of the bank loans is estimated at \$3,742 (2015 – \$4,233).

The estimate is based on the valuation technique of discounting future cash flows. Expected future interest and principal payments are discounted using Level 2 inputs such as current interest rates for similar loans that are available from Canadian chartered banks at December 31, 2016, 3.74% (2015 – 3.13%) for loans with a ten-year term and 2.97% (2015 – 2.80%) for loans with a five-year term

The remaining minimum principal payments required are:

	2016
2017	\$ 449
2018	463
2019	478
2020	492
2021 and beyond	1,900
	\$ 3,782

The Authority has an operating credit facility of up to \$2,500 available at an interest rate not to exceed the prime lending rate. No amount had been drawn down on the credit facility at December 31, 2016 (2015 – nil). The credit facility is available to the Authority as required and has no renewal date or fixed term.

The Minister of Finance has authorized all of the Authority's borrowing.

11. Pension Plan

Substantially all of the employees of the Authority are covered by the Public Service Pension Plan (the "Plan"), a defined benefit plan established through legislation and sponsored by the Government of Canada. Contributions are required by both the employees and the Authority. The President of the Treasury Board of Canada sets the required employer contributions based on a multiple of the employees' required contribution. The general contribution rate effective at December 31, 2016 was 1.15 to 1 of employee contributions (2015 – 1.28 to 1) to a defined salary threshold for all existing plan members contributing to the Public Service Pension Plan on or before December 31, 2012. The general contribution rate effective at December 31, 2016 was 1.11 to 1 of employee contributions (2015 – 1.28 to 1) to a defined salary threshold for all new plan members who joined the Public Service Pension Plan on or after January 1, 2013. On the portion of salaries above the defined threshold, the Authority is required to contribute on a ratio of 6.67 to 1 of employee contributions (2015 – 7.13 to 1). Total contributions by the Authority of \$1,065 (2015 – \$1,082) were recognized as an expense in the current year.

The Government of Canada holds a statutory obligation for the payment of benefits relating to the Plan. Pension benefits generally accrue up to a maximum period of 35 years at an annual rate of two percent of pensionable service times the average of the best five consecutive years of earnings. The benefits are coordinated with the Canada/Québec Pension Plan benefits and are indexed to inflation.

Contributions to the Public Service Pension Plan consisted of:

	2016	2015
Contributions by the Authority	\$ 1,065	\$ 1,082
Contributions by employees	\$ 930	\$ 810

12. Employee Severance Benefits

The post-employment severance benefit was provided to all employees under various collective agreements and employment contracts. As of 2012, this benefit is no longer offered to employees recruited by the Authority, but liabilities remain for employees who did not choose to have the benefit curtailed immediately. The severance benefit is measured at its actuarially determined amount. This benefit plan is unfunded and thus has no assets, resulting in a plan deficit equal to the accrued benefit obligation.

The projected unit credit method of funding was used for the valuation. Under this method the accrued benefit obligation is equal to the actuarial present value of all future benefits, taking into account the assumptions described below, multiplied by the ratio of an employee's service at the valuation date to total service at the assumed termination date. The current service cost for a period is equal to the actuarial present value of benefits attributed to employees' services rendered in that period. These costs, along with the interest cost, and experience loss due to settlement are included in the statement of comprehensive income (loss) for the year ended December 31, 2016 with \$122 (2015 – \$132) under pilots' fees, salaries and benefits and \$1 (2015 – \$2) under pilot boat crews' salaries and benefits. The cumulative amount of actuarial losses recognized in other comprehensive income is \$397 at December 31, 2016 (2015 – \$394).

Information about the plan, measured at December 31, is as follows:

	2016	2015
Reconciliation of accrued benefit obligation		
Accrued benefit obligation, beginning of the year	\$ 1,547	\$ 1,538
Current service cost	75	81
Interest cost	48	53
Benefits paid during the year	(204)	(161)
Actuarial losses	3	36
Accrued benefit obligation, end of the year	\$ 1,469	\$ 1,547
Components of expense recognized in profit and loss		
Current service cost	\$ 75	\$ 81
Interest cost	48	53
Total expense recognized in profit and loss	\$ 123	\$ 134
Analysis of actuarial gain or loss		
Cumulative actuarial losses, beginning of the year	\$ 394	\$ 358
Change in discount rate	—	23
Experience loss	3	13
Cumulative actuarial losses, end of the year	\$ 397	\$ 394
Classification of accrued benefit obligation		
Current portion	\$ 83	\$ 128
Non-current portion	1,386	1,419
Accrued benefit obligation, end of the year	\$ 1,469	\$ 1,547
Key assumptions used in the actuarial valuation		
Discount rate		3.30%
Estimated salary rate increase		2.75%
Age at retirement	33% at age 60, remainder at age 65	

Assumed discount rates have a significant effect on the amounts reported for the accrued benefit obligations. A decrease in the discount rate of 1% would increase the defined benefit obligation at December 31, 2016 by \$120. An increase in the discount rate of 1% would decrease the defined benefit obligation at December 31, 2016 by \$107.

The assumed salary increase rates also have a significant effect on the amounts reported for the accrued benefit obligation. A 1% increase in this assumption would increase the defined benefit obligation at December 31, 2016 by \$120. A 1% decrease would reduce the obligation at December 31, 2016 by \$108.

When the retirement age assumption is reduced by one year for all employees, the defined benefit obligation increases by \$6 for December 31, 2016.

The weighted average of the maturity of the plan at December 31, 2016 was 8 years (2015 – 8 years). The Authority expects that benefits paid during 2017 will be \$83.

13. Capital Management

The Authority's capital is its equity, which is comprised of retained earnings. Equity is represented by net assets.

The Authority is subject to financial management and accountability provisions of the *Financial Administration Act* (FAA) which imposes restrictions in relation to borrowings and acquisition of investments. The Authority must obtain approval of all borrowings from the Minister of Finance on an annual basis. The FAA limits investments to bonds or other obligations of, or guaranteed by, Her Majesty in right of Canada or any province, or any municipality in Canada. During the years ended December 31, 2016 and December 31, 2015, the Authority has complied with these restrictions.

The Authority manages its equity as a by-product of managing its revenues, expenses, assets, liabilities, and general financial dealings to ensure that its objectives are achieved efficiently. The tariffs of pilotage charges must be fair and reasonable and must enable the Authority to operate on a self-sustaining financial basis, as required by the Pilotage Act.

The Authority's objectives when managing capital are:

- to safeguard the Authority's ability to continue as a going concern by having enough capital in reserve to offset possible operating losses, so that it can continue to provide a safe and efficient pilotage service;
- to build an allowance for the cost of constructing or purchasing pilot boats; and
- to build an allowance for an unfunded liability pertaining mainly to employee severance benefits.

The Authority conducts its business in a manner intended to maintain capital to meet these three requirements. Adjustments to the capital structure are made based on changes in economic conditions and the risk characteristics of the underlying assets. In order to maintain or adjust the capital structure, the Authority may change its targeted return on pilotage services and tariff structure for a given period, delay possible construction projects, or sell assets to reduce debt. There has been no change to what the Authority defines as capital or its objectives, policies and processes for managing capital from the prior year.

14. Pilotage Charges

During 2016, the Authority implemented a 1.5% surcharge for the eleven ports serviced by employee pilots. The surcharge will be used to recover a portion of recent losses incurred due to shortfalls in expected revenues. This surcharge came into force on March 11, 2016, and will be in effect for a 36-month period.

	2016	2015
Pilotage charges	\$ 23,789	\$ 22,622
Surcharge	278	—
Total pilotage charges	\$ 24,067	\$ 22,622

15. Related Party Transactions

(a) Trading transactions

The Authority is related in terms of common ownership to all Government of Canada created departments, agencies and Crown corporations. The Authority enters into transactions with these entities in the normal course of business, under the same terms and conditions that apply to unrelated parties. The majority of these transactions are not of significance and do not have a material effect on these financial statements.

(b) Compensation of key management personnel

The remuneration of Members and key management personnel for the year ended December 31 included:

Executive Management Compensation	2016	2015
Short-term employee benefits, such as wages and salaries	\$ 620	\$ 621
Post-employment benefits (Note 15(c))	64	95
	\$ 684	\$ 716
Board Compensation		
Retainer	\$ 24	\$ 23
Per diem	33	49
	\$ 57	\$ 72

(c) Pension plan

Substantially all of the employees of the Authority are covered by the Public Service Pension Plan ("the Plan"), a contributory defined benefit plan established through legislation and sponsored by the Government of Canada. Contributions are required by both the employees and the Authority while the Government of Canada holds a statutory obligation for the payment of benefits relating to the Plan (Note 11).

16. Commitments

The Authority has entered into contracts for pilot boat services, software development, and support for weather buoy operations requiring the following minimum payments:

As at	December 31, 2016
Not later than one year	\$ 2,499
Later than one year but not later than five years	374
Later than five years	157
	\$ 3,030

The Authority has also committed to operating leases for office space, equipment, and wharfage requiring the following minimum payments:

As at	December 31, 2016
Not later than one year	\$ 89
Later than one year but not later than five years	740
Later than five years	1,134
	\$ 1,963

During the year ended December 31, 2016, \$280 was recognized in the statement of comprehensive income (loss) in respect of expenses incurred under operating leases (2015 - \$287).